1 **SPECIAL ARTICLES**
2 .Envelope
3.01 **DELIVERING TO STACK AND FEEDING THEREFROM**
3.02 .Aligning at stack
3.03 .Intermediate tray
3.04 .With job divider (e.g., resettable bail bar or double bar separator)
3.05 .Feeding from bottom of stack
3.06 ..Control for feeding responsive to delivering
3.07 ..Pneumatic separating
3.08 .Feeding from top of stack
3.09 ..Control for feeding responsive to delivering
3.11 ..Pneumatic separating
3.12 .Sheets on edges
3.13 .With sheet sensor for selective location
3.14 **FEEDING AND DELIVERING**
3.15 .Sensor located at the feeder and controls the delivering
3.16 ..Having timer
3.17 .Sensor located at the delivering and controls the feeding
3.18 .Conveyor releases to subsequent conveyor
3.19 ..With alternate conveying path
3.2 ..Including conveyor couple
3.21 ..On peripheral face of drum or belt
3.22 ...Pneumatic
3.23 ..Including pneumatic conveyor
3.24 ..Including gripper couple
4.01 .Separator and conveyor
5 ..Pneumatic separator
6 ..Continuous endless conveyor
4.02 ..Sensor located at the separator and controls the conveyor
4.03 ..Sensor located at the conveyor and controls the separator
4.04 ..Mechanically linked for simultaneous operation
4.05 ..Endless belt separator
4.06 ...To endless belt conveyor
4.07 ...To rotary conveyor
4.08 ..Rotary separator
4.09 ...To endless belt conveyor
4.1 ...To rotary conveyor
4.11 ..Reciprocating separator
4.12 ...To rotary conveyor
7 .Continuous endless conveyors
8.1 **FEEDING**
9.01 .Multiple supplies
9.02 ..Sheet feeding from one supply controls feeding from another supply
9.03 ...Responsive to empty supply
9.04 ...Alternate feeding
9.05 ..Supply selection (e.g., sheet color)
9.06 ...Size selection
9.07 ..Single separator acts on multiple supplies
9.08 ...Movably mounted supply
9.09 ..Including manual supply
9.1 ..Including continuous web supply
9.11 ..Superposed supplies
9.12 ..Juxtaposed supplies
9.13 ..With convergence to single path
10.01 .Separator and conveyor
11 ..Pneumatic separator
12 ...Endless conveyor
13 ....Side aligner
14 ...Reciprocating conveyor
15 ...Side aligner
16 ..Buckling separator and endless conveyor
17 ...Side aligner
10.02 ..Sensor located at the separator and controls the conveyor
10.03 ..Sensor located at the conveyor and controls the separator
10.04 ..Mechanically linked for simultaneous operation
10.05 ..Selective drive (e.g., number of degree of rotation)
10.06 ..Endless belt separator
10.07 ...To endless belt conveyor
10.08 ...To rotary conveyor
10.09 ..Rotary separator
10.1 ...To endless belt conveyor
10.11 ...To rotary conveyor
10.12 ....With aligning
10.13 ....With clutch
10.14 ..Reciprocating separator
10.15 ...To endless belt conveyor
10.16 ...To rotary conveyor
18 .Separators
18.1 ..Magnetic or electrostatic
18.2 ...Cyclicly moving
18.3 ..Surface-piercing element(s)
19 ..Buckling
20 ...Pneumatic
21 ...Rotary

22 ....Pack advancer
23 ....Bottom feed
24 ...Pack advancer
25 ....Feeler control
90 ..Pneumatic
91 ...Plural, relatively-moving suction members
92 ....Laterally receding members (e.g., for tautening sheet laterally)
93 ....Including members for separating and members for forwarding sheet
94 ...Unidirectionally-moving suction member or surface
95 ....Having additional movement
96 ....With means to adjust suction
97 ...Sheet removal by pressurized gas
98 ....And suction means
99 ...Suction member acting on bottom of pack
100 ....Oscillating member bending margin of bottom sheet
101 .....With moving segments supporting remainder of pack
102 ....Suction member reciprocating perpendicularly to sheet
103 ...Sheet-moving action of suction member results from engagement with sheet
104 ...With means to restrain feed of next sheet
105 ...Means effecting preliminary operation on sheets in pack
106 ....Suction member flexing sheet or portion
107 ...Oscillating suction member
108 ...Controlled by valve means
30.1 ...Pack advancer
31 ....Feeler control
31.1 ....Stack on edge
33 ..Adhesive
34 ..Endless belt
35 ...Bottom feed
109 ..Rotary
37 ...Preliminary protrusion
38 ....Feeler control
110 ...Control of separator responsive to sensing of sheet
111 ....Including plural separators or plural sensors
112 ...Suction assisted
113 ...Separator rotating in plane of foremost sheet
114 ...Variably or intermittently driven
115 ....In oscillatory movement
116 ....By over-running one-way drive
117 ...Separator adjustable or retractable relative to pack
118 ....Feed by successive approach and retraction
119 ...Separator having non-uniform periphery
120 ....Including relatively movable elements
121 ...With means to restrain feed of next sheet
122 ....By restrainer having rearwardly moving surface
123 ....By restrainer acting on rear end of sheet
124 ....By adjustable restrainer
125 .....Including restraining roller
126 ...With means to urge pack toward separator
127 ....Including pivoted pack holder
42 ..Reciprocating
128 ...With pack advancer
129 ....With sheet on edge
130 ....And feeler control for advancer
131 ...Bottom feed
132 ....Suction assisted
133 ....With means to prepare pack or bottom sheet for feeding
134 .....By relief of pack weight
135 .....By partial planar movement of bottom sheet
136 ....With means to skip or stop feed
137 ....With means to restrain feed of next sheet
138 .....By adjustable exit or throat
139 ....By pusher reciprocating variably or non-rectilinearly
140 .....Orbital (e.g., four-way) motion of pusher
141 ....By pin (e.g., pointed) pusher
142 ....By adjustable (e.g., for sheet thickness) pusher
143 ....By self-aligning (e.g., yieldable) pushers
144 ....Holder adjustable to size of sheet

225 .By means to change direction of sheet travel
226 .With means to align sheet
227 ..Responsive to sheet-sensor
228 ...To control gripper-couple moving sheet to alignment
229 ..With means to retard sheet before alignment
230 ...By member moved with sheet
231 ....Including suction retarder
232 ..Against aligner entering hole in sheet
233 ..Against rear-edge aligner
234 ..Against plural aligning assemblages
235 ...For incremental travel against successive front-edge aligners
236 ...For front and side alignment of sheet
237 ....Alignment of imbricated sheets
238 ....Including oppositely-disposed side-edge aligners
239 ...Plural aligners selectively used
240 ...Oppositely-disposed side-edge aligners
241 ..By aligning a sheet-holder and its sheets
242 ..Against temporarily-stopped conveyer
243 ..Against front-edge aligner moved in direction of sheet travel
244 ...By retro-moving front-edge aligner
245 ..Against front-edge aligner interposed into sheet path
246 ...Synchronized with intermittently-active conveyor-couple
247 ....Including sheet-margin gripper
248 ..Against aligner adjacent side edge of sheet
249 ...By shifting aligner and gripper-couple laterally of sheet travel
250 ...By means to shift sheet laterally against aligner
251 ....By oblique conveyor
252 ....By gripper-couple pulling sheet laterally
253 ..With means to adjust position of aligner
254 ...During operation of feeder
255 ...With indicator of aligner position
256 .With means to interrupt feeding
258.01 ..Responsive to sheet sensor
259 ...Plural sensors
260 ....Pneumatic sensors (e.g., to sense superposed sheets)
261 ....Laterally spaced sensors (e.g., to sense misalignment)
262 ...Excess-thickness sensor
263 ....To activate an electric circuit
258.02 ...Interrupts feeding upstream only
258.03 ...Single sensor with timer
258.04 ...Sensor operates warning indicator
258.05 ...Mechanical linkage
257 ..Manually controlled (e.g., for alternate-cycle feed)
264 .By means to convey sheet (e.g., from pack to operation)
265.01 ..Responsive to sheet sensor
265.02 ...Plural sensors
265.03 ....Laterally spaced sensors
265.04 ...Thickness sensor
266 ..With intermittent movement of the sheet
267 ..On oscillating or reciprocating conveyor
268 ...Including gripper-couple
269 ...Including rear-edge pusher
270 ..With means to vary speed of conveyor sheet
271 ..By rear-edge pusher
272 ..Between superposed conveyor couple
273 ...Having means to permit separation of couple
274 ....Including couple-elements resiliently urged together
275 ..On peripheral face of drum or belt
276 ...Including pneumatic means
277 ...Including gripper-couple
145 .Pack holders
146 ..With means to vibrate pack
147 ..Advancer
148 ...With means to move portions of advancer unequally (e.g., for unequal-thickness sheets)
149 ...For on-edge or imbricated sheets

150 ....Supported by moving conveyor belt
151 .....For imbricated sheets
152 ...Control of advancer responsive to sensing of foremost sheet
153 ....Sensor included in feed mechanism
154 ....Sensor activates electric or fluidic circuit
155 .....Controlled electric or fluidic motor actuates advancer
156 ....Controlled pawl and ratchet actuates advancer
157 ...With means to replenish pack or retract advancer platform
158 ....Using plural platforms during continuous operation of feeder
159 .....And plural drives for plural platforms
160 ...Urged by spring or weight
161 ..With means to bow sheets
162 ..Holder movable relative to feed position
163 ...Holder convertible from feed to delivery
164 ...Holder moved parallel to plane of sheets
165 ..For feed from bottom of pack
166 ...With means to relieve weight of pack
167 ..With means to restrain feed of next sheet
168 ...By sheet-impaling restrainer
169 ...By lateral margin or side-edge restrainer
170 ....Corner snubber
171 ..Holder adjustable to size of sheet
278 **DELIVERING**
279 .Multiple discharge
280 ..For separating sheet from moving assemblage of sheets
281 ...By separating member moving in direction opposite of assemblage
282 ...By sheet attracting means
283 ....Pneumatic attracting means
284 .....Opposed pneumatic attracting means
285 ...With leading edges of sheets offset
286 ....With means to cause offset
287 ..Of successive sheets to plural receivers in succession
288 ...With control means to vary mode of operation
289 ....To bypass array of receivers
290 .....To route sheets to subsequent array of receivers
291 ...With selective actuation of means for inverting duplex sheets
292 ...With movable receivers or receiver portions
293 ....With means to increase spacing between receiver defining portions
294 ....Receivers moving into registry with delivery zone
295 .....Receivers arranged in rotary array
296 ...By diverter or conveyor moving past receivers
297 ...By individual diverter for each receiver
298 ..With means to program discharge destination
299 ..To laterally spaced receivers
300 ..By release from conveyor at plural locations
301 ..Selectively to recirculating path or exit
302 ..By conveyor section movable to direct sheets along alternate paths
303 ..With movable diverter
304 ...Bidirectionally rotating diverter roller
305 ...Individual diverter for each receiver
65 .Optional face or back
66 ..Endless conveyors to flies
67 .Endless conveyors to curtains
69 .Endless conveyors to other conveyors
70 ..To flies
72 .Rotary conveyors to flies
73 .Curtains
306 .With transfer means between conveyor and receiver
307 ..Means to strip sheets from engagement with moving conveyor
308 ...Stripper cyclically movable between stripping and nonstripping position
309 ...By air blast
310 ...By means to attract sheet from conveyor

311 ...Stripper normally in contact with conveyor surface
312 ...Stripper normally in spaced relation to conveyor surface
313 ....With means to maintain constant spacing of movable stripper
175 ..Means to drape sheets over horizontal bar
176 ..Responsive to delivered sheet
177 ..Means to push sheets out of edgewise into broadside movement (e.g., packer)
178 ...Rotating packer
179 ....Screw or helix
180 ...By reciprocating or oscillating packer
181 ....Packing sheets on-edge into receiver
182 ..Means to retard sheets
183 ...By suction retarder
184 ..Means to change orientation or direction of sheets during delivery
185 ...Orientation-changing means
186 ....Sheet inverting means
187 ....By rotating circumferential-pocket members
188 ..Means to bow sheets during delivery
189 ..Means temporarily interposed between conveyor and receiver
190 ...Transversely-disposed, gapped sheet-supports on endless carrier
191 ...Endless belt on reciprocating carrier
192 ...Counter-rotating supports for lateral margins
193 .By electrostatic or magnetic conveyor
194 .By pneumatic conveyor
195 ..Using pressurized gas
196 ..Unidirectionally-moving suction member or surface
197 ...Including endless-belt conveyor and suction chamber
198 .By endless conveyor
199 ..Operation controlled by delivered sheet
200 ..With delivery end movably relative to pack receiver
201 ...Moving away from increasing delivered pack
202 ..With means to vary speed of sheets on conveyor(s)
203 ...By cyclicly varying conveyor speed
204 ..Suspension gripper
205 ...For lateral margins of conveyed sheet
206 ...With means to adjust gripper
314 .Rotary conveyor
315 ..With circumferential pocket members
81 ..Traveling
82 ..Suspension gripper
83 ..Flies
84 .Reciprocating conveyors
85 ..Suspension gripper
207 .To receiver for pack of sheets
208 ..With means to discharge static electricity
209 ..With means to bow sheets
210 ..With means to vibrate receiver
211 ..With air cushion between sheet and pack
212 ..For receiving sheets from below the pack
213 ..With movable sheet-surface support
214 ...Receding from delivery zone (e.g., retractor)
215 ....Responsive to increase
216 ....Conveyor-receiver for imbricated sheets
217 ....Lowering as pack-height increases
218 .....With auxiliary support for part of pile
219 .....Spring-loaded support
220 ..With movable pack-limiting member(s) (e.g., hold-down)
221 ...And means to move members cyclicly against sheet edges (e.g., jogger)
222 ....And yieldable connection in moving means
223 ...Members adjustable to sheet size
224 ....Sheet-impact bumper member

CROSS-REFERENCE ART COLLECTIONS

900 **STRIPPER**
901 **MAGNETIC OPERATION**

902 **REVERSE DIRECTION OF SHEET MOVEMENT**

903 **TRAVELING WICKET (FOR STACK ON EDGE)**

FOREIGN ART COLLECTIONS

FOR **CLASS-RELATED FOREIGN DOCUMENTS**